MI Access™
Michigan's Alternate Assessment Program

Functional Independence

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Science

Item Descriptors

Grade 11

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DIRECTIONS: Read each question. Choose the **BEST** answer for each question.

1 C.CN.FI.EB.I.1.h.4a: Identify and/or use various sources of scientific information

Identify the best source of information for making a personal health decision

A selected a source that could provide incomplete information as a basis for a decision

B selected a source that could provide incomplete information as a basis for a decision

C correctly selected the information source that is best for making the decision

2 C.CN.FI.EB.I.1.m.3ADDh: Identify and/or use tools and equipment appropriate to scientific investigations

Identify the direction toward which a compass needle points

A selected an incorrect description

B selected an incorrect description

C correctly selected the direction toward which a compass needle points

3 R.RO.FI.EB.II.1.h.6a: Develop an awareness of and sensitivity to the natural world

Recognize which activity promotes habitat restoration

A selected an activity that does not restore habitat

B correctly identified an activity that promotes habitat restoration

C selected an activity that does not restore habitat

4 L.CE.FI.EB.III.1.h.1a: Recognize that multi-cellular organisms grow and reproduce

Compare and distinguish 3 cell samples from different multi-cellular organisms

A did not identify the cell sample that had a unique characteristic

B identified the cell sample that had the unique characteristic

C did not identify the cell sample that had a unique characteristic

5 R.RO.FI.EB.II.1.h.1a:
Evaluate a plan based on the strengths and weaknesses of claims, arguments, or data

Identify the best science reference to evaluate a product opinion

A correctly identified the best scientific reference

B selected a reference that does not offer a scientific reference

C selected a reference that does not necessarily provide unbiased scientific information

6 L.CE.FI.EB.III.1.h.1a:
Recognize that multi-cellular organisms grow and reproduce

Given three factors that contribute to growth, identify which factor best explains the increase in size of a specified animal body part

A selected a factor that facilitates growth but does not change body part size

B selected a factor that has a minor contribution to the increase in body part size

C identified the major growth factor that accounts for the change in size of the specified animal body part

7 L.OR.FI.EB.III.2.h.1a:
Compare and/or classify organisms in major groups based on their structure

Recognize an animal's group classification based on its observable features

A did not identify the animal's group

B correctly classified the animal in its group based on its features

C did not identify the animal's group

8 L.OR.FI.EB.III.2.e.1ADDh:
Identify specific variations of observable body parts in a variety of animals

Given three characteristics of a commonly recognized animal, identify the characteristic that enables the animal to move in its specified environment

A identified the animal's body feature that enables it's movement in the specified environment

B selected a body feature that does not enable animal movement

C selected an animal feature that guides but does not enable movement

9 L.OR.FI.EB.III.2.h.1a:
Compare and/or classify organisms in major groups based on their structure

Recognize a characteristics both the identified trees have in common though each tree is classified into a different major group of trees

A selected the characteristic that both trees have in common

B selected a characteristic that distinguishes the trees into separate groups

C selected a characteristic that distinguishes the trees into separate groups

10 L.OR.FI.EB.III.2.h.2a:
Identify the life cycle of an organism associated with human disease

Given 3 descriptions of animal behavior, recognize which behavior demonstrates a parasitic relationship

A selected a behavior of a single animal

B selected the description of parasitic behavior in the relationship between two animals

C selected a description of mutually beneficial behavior in the relationship between two organisms

11 L.OR.FI.EB.III.2.h.3a:
Explain why plants and animals store food

Identify the type of body tissue where potential chemical energy is stored by humans

A identified the type of body tissue that stores potential chemical energy

B selected tissue that uses but does not store chemical energy reserves

C selected tissue that uses but does not store chemical energy reserves

12 L.OR.FI.EB.III.2.h.4a:
Recognize how living things maintain a healthy balance

Recognize the health-maintenance function of a specified cell type

A correct, identified the function of the specified cell type for maintaining health

B selected a body process that is not a specialized function of the specified cells

C selected a body process that is not a specialized function of the specified cells

13 L.OR.FI.EB.III.2.h.4a:
Recognize how living things maintain a healthy balance

Recognize the feature of a human body organ that provides defense from a specified type of infection

A selected a feature that is not applicable for the organ's provision of defense from infection

B selected a feature that is not applicable for the organ's provision of defense from infection

C selected the feature that provides for the organ's defense from infection

14 L.OR.FI.EB.III.2.h.2a:
Identify the life cycle of an organism associated with human disease

Recognize how injection of a vaccine promotes health

A selected a false statement of how a vaccine promotes health

B selected a false statement regarding the benefits from vaccines

C correct, identified how a vaccine protect against infectious diseases

15 L.EC.FI.EB.III.5.h.2a:
Identify and/or explain that energy flows through familiar ecosystems

Identify the described role of organisms in a food chain

A selected a role in a food chain that was not described

B selected a role in a food chain that was not described

C correct, identified the described role of organisms in a food chain

16 L.EC.FI.EB.III.5.h.1a:
Describe common ecological relationships between and among species and their environments

Identify the description of a mutual beneficial interaction between 2 different organisms

A correctly selected the mutually beneficial relationship

B selected a parasitic relationship between 2 organisms

C selected a relationship void of a mutually beneficial interaction

17 L.EC.FI.EB.III.5.h.3a:
Identify and/or describe general factors that influence population size

Recognize the most likely factor that could lead to the change in an animal population in a specified ecosystem

A selected a prevailing factor that would be in place before and after the change in animal population

B selected an in-place cyclical factor that does not change the normal variation of sustained animal populations in the ecosystem

C selected an episodic factor, new to the sustained ecosystem, that could change the size of animal populations in the specified environment

18 L.EC.FI.EB.III.5.h.3a:
Identify and/or describe general factors that influence population size

Given three reasons as basis for change in animal population, recognize the mostly likely change-in-environment reason for change in a commonly recognized animal's population

A recognized the environmental-change reason that could cause a decrease in animal reproduction for the year

B selected an environmental change from which no obvious reason stems for change in animal population size

C selected a non-environmental change that is immaterial to animal population levels

19 P.ME.FI.EB.IV.1.h.1a: Identify the risks and benefits of using common household and agricultural materials

Recognize the need for including warning labels on household products

A correct, identifed a valid reason for use of warning labels

B selected an unfounded reason for the use of warning labels

C selected an unfounded reason for the use of warning labels

20 P.ME.FI.EB.IV.1.h.3a: Identify the structural parts and electrical charges of atoms

Identify the subatomic particle that is the basis for electricity

A chose an incorrect subatomic particle

B chose an incorrect subatomic particle

C chose the correct subatomic particle

21 P.ME.FI.EB.IV.1.m.4ADDh: Describe the arrangement and motion of molecules in solids, liquids, and gases

Recognize the effect on the freezing point of the solution of dissolving a specified compound into water

A selected the opposite effect on the freezing point after adding the compound

B correct, identified the effect the compound had on the freezing point of the solution

C selected the wrong effect on the freezing point of the solution after adding the compound

22 P.ME.FI.EB.IV.1.h.3a:
Identify the structural parts and electrical charges of atoms

Recognize the relationship between charged atomic particles

A selected the opposite relationship between two identically charged particles

B correct, identified the relationship between two differently charged atomic particles

C selected the opposite relationship between two identically charged particles

23 P.ME.FI.EB.IV.1.m.4ADDh:
Describe the arrangement and motion of molecules in solids, liquids, and gases

Identify the two distinct states of matter represented in an illustration

A selected one correct and one incorrect state of matter

B selected one correct and one incorrect state of matter

C selected the two correct states of matter

24 P.ME.FI.EB.IV.1.h.4a:
Identify and/or explore how current is controlled in simple and parallel circuits

Given a simple electric circuit diagram, identify the action needed to enable the circuit to work

A selected an action that does not appear necessary in order for the circuit to work

B selected an action that does not appear necessary in order for the circuit to work

C correct, identified the action required for the circuit to work by establishing current flow

25 P.ME.FI.EB.IV.1.m.4ADDh:
Describe the arrangement and motion of molecules in solids, liquids, and gases

Identify the reason for space left between solid sections of road surfaces

A selected an incorrect reason for leaving space

B selected an incorrect reason for leaving space

C correctly identified the reason that space is necessary

26 P.CM.FI.EB.IV.2.m.1ADDh:
Describe common physical changes in matter

Recognize the correct process for a change of state for a specified substance in a specified situation

A selected the incorrect process for the change of state

B selected the incorrect process for the change of state

C correctly selected the change of state process described

27 P.CM.FI.EB.IV.2.m.1ADDh:
Describe common physical changes in matter

Recognize the energy change needed to change a liquid to a solid

A recognized the energy change needed to change a liquid into a solid

B selected a process that does not change the energy level of the substance

C selected the opposite energy change process required to change a liquid into a solid

28 P.CM.FI.EB.IV.2.h.4a:
Identify common energy transformations in everyday situations

Recognize the three types and order of energy transformations from the source of fuel to the energy required for operation of a specified machine

A selected a set of three energy transformation types where two were incorrect and one was out of order

B selected a set of three incorrect energy transformations

C recognized the three energy transformations from fuel source to the energy used to power the machine

29 P.MO.FI.EB.IV.3.h.1a:
Identify patterns of force and motion in the operation of complex machines

Recognize the related motion of three interacting gears as illustrated

A selected an incorrect outcome regarding gear motion

B selected an incorrect outcome regarding gear motion

C recognized how the specified gear would move in relation to the given movement of another gear

30 P.MO.FI.EB.IV.3.m.3ADDh:
Identify and/or describe the non-contact forces exerted by magnets and gravity

Understand the basis of tides

A recognized the cause of tides

B selected an incorrect reason for tides to occur

C selected an incorrect reason for tides to occur

31 P.WV.FI.EB.IV.4.h.3a:
Identify properties of waves

Recognize how a specific commonly known musical instrument produces a wave

A selected a condition that does not produce a wave

B selected a condition that alone, without physical reaction, does not produce a wave

C recognized how the instrument physically forms a wave

32 P.WV.FI.EB.IV.4.m.4ADDh:
Identify and/or describe ways in which light interacts with matter

Identify where light is refracted as it passes from air to water

A selected a location where light is not refracted

B selected a location where light is not refracted

C correctly selected where light is refracted as it passes between 2 media

33 P.WV.FI.EB.IV.4.h.3a: Identify properties of waves

Recognize how the pitch of sound from a moving object changes as the sounding object moves past a stationary person

A selected the sound that has no volume

B correct, recognized that the person would hear a sound that changes in pitch

C selected that the pitch of the sound heard does not change as the object moves past

34 E.GE.FI.EB.V.1.m.4ADDh: Identify and/or explain how rocks and fossils help us understand the history of the earth

Understand how to interpret fossil evidence

A concluded that an organism exists today based on fossil evidence

B correct, used the evidence to conclude that the fossilized organism was once present in a specified location

C concluded that a population of the organism was once present beyond the area in which a single organism fossil was found

35 E.GE.FI.EB.V.1.e.2ADDh: Identify and/or describe types of earth materials and their uses

Recognize which of three soil types through which water most readily flows

A selected a soil type not having the best water flow-through rate

B correct, identified the soil type having the best water flow-through rate

C selected a soil type not having the best water flow-through rate

36 E.GE.FI.EB.IV.1.h.1a: Identify and/or describe surface features caused by the Ice Age

Recognize the specified landform based on the description

A correctly identified the described landform

B selected a landform that does not match the description

C selected a landform that does not match the description

37 E.GE.FI.EB.V.1.m.4ADDh: Identify and/or explain how rocks and fossils help us understand the history of the earth

Recognize the source of scientific evidence that provides information about earlier forms of plant life

A identified the source of evidence that provides information about earlier plant life

B selected an Earth-surface-forming process that does not provide organic based evidence

C selected an extra-terrestrial source of solar activity that does not provide organic based evidence

38 E.GE.FI.EB.V.1.h.4a: Identify and design a plan to conserve and/or recycle at home, work, or school

Recognize which type of light source is expected to most efficiently use electricity

A selected a light source that does not have an efficient design for use of electricity

B correct, identified the light source that has an efficient design for using electricity

C selected a light source that does not have an efficient design for use of electricity

39 E.HY.FI.EB.V.2.h.2a: Identify and/or describe how human activities affect the quality of water

Given 3 consequences from a landfill, identify the consequence that could harm existing environmental conditions

A selected a beneficial consequence for some organisms in the ecosystem

B selected the negative consequence that may impact an existing environmental resource

C selected a beneficial consequence for recycling resources to the environment

40 E.HY.FI.EB.V.2.e.1ADDh: Identify safety precautions with the three states of water

Identify which water temperature is safest for the specified use

A selected a water temperature that is not safest for the specified use

B correctly identified the safest of the three water temperatures for its specified use

C selected a water temperature that is not safest for the specified use

41 E.HY.FI.EB.V.2.m.2ADDh: Describe how surface water in Michigan reaches the ocean and returns

Recognize flow pathways by which a specified form of water becomes another form of water in the environment

A selected only one of the two possible water pathways

B correct, selected the two pathways in which water flows from one form to another form

C selected only one of the two possible water pathways

42 E.AW.FI.EB.V.3.m.1ADDh:
Identify the uses of weather tools, such as thermometers, rain gauges, and weather maps

Identify the best conditions for collecting data using a specified weather tool

A selected a condition under which the measurement tool will not work

B correct, selected the condition in which the measurement tool will work accurately

C selected a condition that could underestimate the measurement of the weather data

43 E.AW.FI.EB.V.3.e.2ADDh:
Identify and/or describe seasonal changes in Michigan's weather

Given three temperature readings as illustrated on three outdoor thermometers, select the thermometer that displays a likely winter daytime temperature

A selected a temperature reading that is not expected for a winter day

B selected a temperature reading that is not expected for a winter day

C correctly selected the thermometer that displays a likely winter's day temperature

44 E.AW.FI.EB.V.3.e.3ADDh:
Identify and explain appropriate safety precautions during severe weather

Understand distinctions among descriptions of severe weather

A correctly associated the word with the appropriate description of severe weather conditions

B did not correctly associate the word with the appropriate description of severe weather conditions

C did not correctly associate the word with the appropriate description of severe weather conditions

45 E.SS.FI.EB.V.4.m.2ADDh:
Demonstrate a basic and general awareness about the motion of the earth

Recognize the reason why seasonal weather is opposite between the Northern and Southern Hemisphere

A correctly recognized the basis for seasonal difference between the 2 hemispheres

B selected a description of Earth's movement irrelevant to seasonal weather

C selected a description of Earth's movement irrelevant to seasonal weather

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